

APPENDIX F

FOREST PLAN AMENDMENTS

Implementation of the preferred Alternative requires site specific forest plan amendments to the Bitterroot Forest Plan (1987) (FEIS p. 1-12 to 1-14). Therefore, an amendment will be needed that will modify the following Forest Plan standards specifically as they relate to the Como Forest Health project.

- Ø Coarse woody debris standard
- Ø Winter range thermal cover standard
- Ø Visual Quality Objectives

The need for these amendments to meet the purpose and need of the Como Forest Health project was disclosed in the Notice of Intent (June 17, 2013). This Appendix contains information that compliments the coarse woody debris analysis in the DEIS. The winter range thermal cover analysis is contained in the Wildlife analysis Section 3.3.12.3.

Forest Service Manual (FSM) 1926.51 provides direction for determining what constitutes a “significant amendment” under NFMA. Based on this guidance, these site-specific forest plan amendments are not significant because they will not individually or cumulatively significantly alter the long-term relationship between levels of multiple-use goods and services originally projected; and, they will not have an important effect on the entire land management plan, or affect land and resources throughout a large portion of the planning area during the planning period. The amendments modify standards and guidelines, specific to the Como Forest Health project. Therefore, they are not a long term change in the plan. The Bitterroot Forest Plan is being revised. The public has been notified of these amendments throughout the NEPA process.

The amendment analyses are organized to:

- Ø Describe the amendment element
- Ø Explain the purpose and the need for the amendment
- Ø Describe the direct, indirect and cumulative impact of the amendment
- Ø Apply the Forest Service Manual criteria for assessing whether or not the amendment is significant
- Ø Display my conclusion on significance or no- significance

Coarse Woody Debris

Proposed Coarse Woody Debris Site-Specific Amendment

The Bitterroot Forest Plan includes the following Management Area (MA) standards relevant to coarse woody debris and the Como project:

MA 1, 2, 3a: (USDA Forest Service 1987, III-6, f(4); III-12, f (3) and pp. III-19, f (4))

- Ø Site preparation methods will assure the retention of modest levels of organic matter, including woody materials 8 inches or less in diameter, to provide nutrient and ectomycorrhizal levels necessary for maintaining growth rates; while still providing an adequate mineral base for seed germination and reduction of grass competition. On dry and harsh sites, at least 10 to 15 tons per acre of residual debris is needed (Harvey, et al 1981a & 1981b; Harvey, 1982).

The site-specific coarse woody debris standard to be applied for the Como project would read:

- Ø “To maintain soil productivity and wildlife habitat while meeting fuel reduction purpose and needs, coarse woody debris (material greater than 3 inches in diameter) will be left from designated leave trees, both standing and down, and from breakage of limbs and broken tops that will occur during harvest at or above 5-10 tons/acre in Fire Groups 2 and 4. Material will be evenly distributed on each

acre. At least minimum levels will be retained after prescribed fire treatments.” (Fire Groups are described in the Como FEIS Chapter 3).

Purpose and Need of Woody Debris Standard Amendment

Amendment Purpose

This proposed site-specific standard amendment is intended to apply the best available science to the coarse woody debris design of the Como project and support goals and objectives in Forest Plan and project proposal. For this project, the proposed, ecologically-based standard would replace the management area standard in the 1987 Forest Plan (USDA Forest Service 1987, pp. III-19, f(4)).

Intent of the Plan

Pertinent Forest Plan Goals (USDA Forest Service 1987, pp. II-3, II-4)

- Ø Maintain soil productivity
- Ø Design fire management programs that are consistent with other resource goals (Appendices K and M)

Pertinent Forest Plan Objectives (USDA Forest Service 1987, pp. II-6, II-7)

- Ø Design management activities to maintain soil productivity

Need for the Amendment

Since the Forest Plan was signed, additional science is available regarding the amount of coarse woody debris that would be expected in different habitat type groups (Graham et al. 1994; Brown et al. 2000), which provides more refined guidelines for meeting the Forest Plan goals and objectives. The amounts prescribed in the Forest Plan are sometimes contradictory to each other (i.e. 10 to 15 tons/acre in one standard and 25 tons/acre in another; sometimes referring to the same piece of ground). In addition, to reduce fire intensity (flame length and rate of spread), heavy amounts of coarse woody debris should not be left in stands in the Como project area.

Effects of the Como Coarse Woody Debris Amendment

Direct and Indirect Effects

All harvest prescriptions for the Como project would leave a portion of the existing stand on the site. The harvested tree would be either whole-tree yarded to the landing or the tree would be processed in the forest and the logs would be carried to the landing on a forwarder. Coarse woody debris (CWD) (material greater than 3 inches in diameter) will be left from designated leave trees, both standing and down, and from breakage of limbs and broken tops that will occur during harvest. Five to 10 tons/acre in Fire Groups 2 and 4 will maintain future soil productivity (PF-SOIL-005).

The proposed fuel treatments would leave slash on the ground through the winter and into late summer/fall before prescribed burning will be completed. This will provide opportunity for the nutrients in the slash to be leached into the soil.

Cumulative Effects

The CWD requirements for the Como project are discussed in the soils section of Chapter 3 in the Como FEIS. The CWD requirements are based on the most current science, which varies from the amounts shown in the current Forest Plan. The amended CWD requirements for this project will encompass less than 0.1 percent of the Bitterroot National Forest (based on maximum treatment area of 861 acres). Since the 1987 Forest Plan, forest plan amendments have been made to adjust CWD levels. Site-specific forest plan amendments were needed to ensure CWD retention in fuel reduction treatments were based on current science. Previous forest plan amendments in combination with Alternative 2 of this project cumulatively amount to 1.5 percent of the

Bitterroot National Forest. The modifications of the CWD requirements for this project will not have appreciable cumulative effects at the site or forest scale.

Cumulatively, by implementing this site-specific standard for CWD, the Como project area is expected to have appropriate levels of CWD by fire group, over time, fully supporting the Forest goals and objectives.

There is no perceptible cumulative effect of this modification, in conjunction with the site-specific thermal cover modification to the Forest Plan proposed in this project.

Application of FSM 1926.51 “Not Significant” Criteria

Our determination of whether this amendment is significant was done using the process in FSM 1926.51. The handbook states that changes to the land management plan that are not significant can result from four specific situations. This site-specific amendment is compared to those situations below:

Changes to the Land Management Plan That are Not Significant	Coarse Woody Debris Standard Amendment
1. Actions that do not significantly alter the multiple-use goals and objectives for long-term land and resource management.	<p>The coarse woody debris amendment does not alter the multiple-use goals and objectives for long-term land and resource management. The amendment will continue to work toward maintaining soil productivity by replacing the current Forest Plan Standard with one developed using more recent studies.</p> <p>The amendment affects a small area of the Bitterroot National Forest (about 0.1 percent). This site-specific project amendment will have no effect on Forest Plan objectives or outputs.</p>
2. Adjustments of management area boundaries or management prescriptions resulting from further on-site analysis when the adjustments do not cause significant changes in the multiple-use goals and objectives for long-term land and resource management.	The coarse woody debris amendment does not adjust management area boundaries. It provides for more site-specific, ecologically-based management prescription applications by requiring a range of coarse woody debris based on habitat types.
3. Minor changes in standards and guidelines.	The coarse woody debris amendment is a minor change to management area standards based on more recent science.
4. Opportunities for additional projects or activities that will contribute to achievement of the management prescription.	The coarse woody debris amendment applies more recent science to management prescriptions and provides an ecological basis for retaining coarse woody debris.

Conclusion -- Significance/Non-Significance

Based on consideration of the four factors identified in FSM 1926.51, and considering the Forest Plan in its entirety, the adoption of the coarse woody debris amendment to the Bitterroot National Forest Plan is not significant. This amendment is fully consistent with, but further refines and clarifies the means to achieve, current Forest Plan goals and objectives.

Thermal Cover

Site-Specific Amendment Proposed for this standard

The Bitterroot Forest Plan includes the following Forest-wide resource standard relevant to thermal cover and the Como Forest Health project:

1987 Forest Plan Record of Decision (USDA Forest Service 1987, p. 8)

- Ø “Winter range will be managed to provide diversity of forage and hiding cover with at least 25 percent of the area in thermal cover at all times.”

The site-specific thermal cover standard to be applied for the Como Forest Health project would read:

- Ø “Treatment areas in the Como Forest Health project area are exempt from the requirement to provide 25% thermal cover at all times in winter range.
- Ø Thermal cover will be maintained in riparian habitat conservation areas (RHCAs) and outside of treatment areas where thinning and timber harvest would not occur.”

Purpose and Need of Thermal Cover Standard Amendment

Amendment Purpose

This proposed site-specific standard amendment is intended to apply the best available science to the Como Forest Health project’s thermal cover design and adapt to changes that have occurred on the landscape in support of Forest Plan and project goals and objectives. The proposed, ecologically-based standard would replace, for this project, the various management area standards in the 1987 Forest Plan ROD (USDA Forest Service 1987, p. 8).

Intent of the Plan

Pertinent Forest Plan Goals (USDA Forest Service 1987, pp. II-3)

- Ø Provide habitat to support viable populations of native and desirable non-native wildlife and fish.

Pertinent Forest Plan Objectives (USDA Forest Service 1987, pp. II-5)

- Ø Maintain habitat to support viable populations of wildlife species.
- Ø Cooperate with the State of and Montana to maintain the current level of big-game hunting opportunities.

Need for the Amendment

The proposed site-specific amendment recognizes and addresses the conflicts in the Forest Plan between forest-wide insect and disease standards (FP II-28) and the overlapping winter range thermal cover standard in the Forest Plan Record of Decision (1987, pg. 8). The Como Forest Health project area is largely ponderosa pine cover type (FEIS pg. 3-21). The fire return interval is typically five to 25 years, which creates open forests of ponderosa pine and Douglas-fir overstory with small openings of regeneration (FEIS pg. 3-7). The approximate basal area (BA) required to achieve 70% canopy closure in ponderosa pine stands is 190 ft²/acre (Neary 1985). Low elevation ponderosa pine forests are unlikely to sustain this density because of the high likelihood of mountain pine beetle infestation and potential crown fire (FEIS pg. 3-26). To retain large ponderosa pine on low elevation, drier sites, forest density needs to be reduced to less than 80ft²/acre, which would not provide 70% canopy closure.

The Forest Plan Record of Decision states, “Winter range will be managed to provide diversity of forage and hiding cover with at least 25% of the area in thermal cover at all times” (USDA 1987, pg. 8). Thermal cover is defined as coniferous trees 40 feet or taller with an average crown closure of 70 percent or more (Forest Plan pg. VI-41). Research conducted since the ROD for the Forest Plan was signed questions the value of thermal cover for survival of wintering elk (Cook et al. 1998). Researchers found “no significant, positive effect of

thermal cover on the condition of elk during six experiments. In contrast, dense cover provided a costly energetic environment, resulting in significantly greater over-winter mass loss, fat catabolism, and (in one winter) mortality.” Wintering elk survived and retained body weight better in open areas than in thermal cover. For this reason, forage availability appears to be more important for elk winter survival than thermal cover (3.3.12.3). Other studies suggest that elk use of dense cover is related more to protection and security needs, especially during hunting (Wisdom and Cook 2000), rather than thermoregulation.

Direct, Indirect, and Cumulative Impact of Como Forest Health Thermal Cover Amendment

Direct and Indirect Effects

There will be a decrease in the amount of available thermal cover; however it is not expected to impact the elk population in such a way that their viability would be compromised. All units in winter range in the Como Forest Health project area would be thinned to the forest density needed to protect the overstory from mountain pine beetle infestation and crown fire. Big-game thermal cover in ponderosa pine on winter range will be reduced by 10% in Alternative 2, 8% in Alternative 3, and 1% in Alternative 4 in the Como Forest Health project area.

Cumulative Effects

The thermal cover standards and levels for the Como Forest Health project are discussed in Wildlife Section in the EIS. The understanding of the role thermal cover plays in elk viability has changed over the years and is now not thought to be the most important factor in providing effective elk habitat. Since the establishment of the Forest Plan in 1987, five other similar site-specific amendments of the thermal cover standard have been made:

Year	Environmental Document	Ranger District
2001	Burned Area Recovery EIS	Darby, Sula, West Fork
2006	Middle East Fork Hazardous Fuels Reduction EIS	Sula
2008	Trapper-Bunkhouse EIS	Darby
2010	Lower West Fork EIS	West Fork
2011	Larry-Bass EA	Stevensville

There are no reasonably foreseeable actions in the analysis area that would further reduce thermal cover in the Como Forest Health analysis area.

Cumulatively, by implementing this site-specific standard for thermal cover, the Como Forest Health project area is expected to have appropriate levels of thermal cover on winter range, over time, fully supporting the Forest goals and objectives.

There is no perceptible cumulative effect of this modification, in conjunction with the site-specific coarse woody debris and visual quality modifications to the Forest Plan proposed in this project.

Application of FSM 1926.51 “Not Significant” Criteria

Our determination of whether this amendment is significant was done using the process in FSM 1926.51. The handbook states that changes to the land management plan that are not significant can result from four specific situations. This site-specific amendment is compared to those situations below:

Changes to the Land Management Plan That are Not Significant	Thermal Cover Standard Amendment
1. Actions that do not significantly alter the multiple-use goals and objectives for long-term land and resource management.	The thermal cover amendment does not alter the multiple-use goals and objectives for long-term land and resource management. The amendment will continue to work toward maintaining quality habitat for elk by replacing the current Forest Plan Standard with one

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Changes to the Land Management Plan That are Not Significant	Thermal Cover Standard Amendment
	<p>developed using more recent studies.</p> <p>The amendment affects a small area of the Bitterroot National Forest (about 1.5 percent). This short-term, site-specific project amendment will have no effect on Forest Plan objectives or outputs.</p>
2. Adjustments of management area boundaries or management prescriptions resulting from further on-site analysis when the adjustments do not cause significant changes in the multiple-use goals and objectives for long-term land and resource management.	The thermal cover amendment does not adjust management area boundaries. It provides for more site-specific, ecologically-based management prescription by preventing massive canopy loss by thinning out overgrown forest stands.
3. Minor changes in standards and guidelines.	The thermal cover amendment is a minor change to management area standards based on more recent science.
4. Opportunities for additional projects or activities that will contribute to achievement of the management prescription.	The thermal cover amendment applies more recent science to management prescriptions and provides an ecological basis for thinning in thermal cover.

Conclusion -- Significance/Non-Significance

Based on consideration of the four factors identified in FSM 1926.51, and considering the Forest Plan in its entirety, the adoption of the thermal cover amendment to the Bitterroot National Forest Plan is not significant. This amendment is fully consistent with, but further refines and clarifies the means to achieve, current Forest Plan goals and objectives.

Visual Quality Objective

Proposed Visual Quality Objective Site-Specific Amendment

The Bitterroot Forest Plan includes the following Management Area (MA) standards relevant to visual quality objectives and the Como project:

Management Area (MA) 3c - Visual Quality Standards (page III-31):

- Ø b1. The visual quality objective is retention (USDA, 1977)

The visual quality objective standard for Alternative 2 of the Como Forest Health Project would read:

- Ø The visual quality objective in Management area 3c adjacent to NFSR 5621 and in the viewshed of Lake Como will be modification for the next 10 years with treatments in Units 8, 9, 15, 16, 45, 46, and 47 under Alternative 2.

The visual quality objective standard for Alternative 3 of the Como Forest Health Project would read:

- Ø The visual quality objective in Management area 3c in the viewshed of Lake Como will be modification for the next 10 years with treatment in Unit 47 under Alternative 3.

Purpose and Need of Visual Quality Objective Standard Amendment

Amendment Purpose

Commercial timber harvest and associated temporary roads, TLM trails, and landings in Units 8, 9, 15, 16, 45, 46, and 47 proposed in Alternative 2 would not meet the visual quality objective for retention and would be visible from Lake Como. The proposed treatments decrease long-term scenic integrity but without treatment, mountain pine beetle-caused mortality would increase. Mountain pine beetle-caused mortality would reduce scenic integrity but as a natural component of the ecosystem, the recovery of scenic integrity would be faster. The visual quality objective on these 185 acres visible from Lake Como and the Lake Como Recreation area would decrease two levels to Modification under the proposed treatments.

Commercial timber harvest in Unit 47 under Alternative 3 would reduce the scenic integrity from retention to modification in this five acre unit. Though units 8, 9, 15, and 45 would be treated under this alternative, Units 8 and 15 are non-commercial thin units that would block the visibility of commercial treatments in Units 9 and 45. No temporary roads would be built under Alternative 3 and the landing for Unit 47 would be screened by terrain or untreated units.

Intent of the Plan

Pertinent Forest Plan Goals (USDA Forest Service 1987))

- Ø Maintain a high level of visual quality on landscapes seen from population centers and major travel routes, and adjacent to fishing streams. (pp. II-2)
- Ø
- Ø Maintain the retention visual quality objective and manage timber. (III-30)

Pertinent Forest Plan Objectives

No plan objectives specific to visuals.

Need for the Amendment

This proposed site-specific standard amendment is intended to adjust the VQO for a small portion of the Bitterroot National Forest to allow treatment to occur in response to mountain pine beetle-caused mortality. Treatments are necessary to help make these forest stands resilient but will reduce the VQO from the current retention to modification.

Effects of the Como Visual Quality Objective Amendment

Direct and Indirect Effects

Alternative 2

Treatment units that would not meet the Forest Plan VQOs include: 8, 9, 15, 16, 45, 46, and 47. This amendment would have major (as defined on page 3.4-10 of the FEIS) long term effects in the immediate foreground of the Lake Como Recreation Area roads, trails and water area. Other units are screened by topography and vegetation and/or are viewed at greater distances in lower VQO areas. The effects in these screened units would be short-term and recover within five years of project implementation. The treatment effects in the screened units would be reduced contrasting elements (slash piles, stumps, landings, and temporary and permanent roads).

Alternative 3

Treatment Unit 47 and parts of Units 9 and 45 would not meet Forest Plan VQOs. Harvesting Unit 47 would cause this alternative to not meet the retention VQO and this unit would have moderate to major impacts on the Lake Como Viewshed. A reduction in the number of visible units from the Lake Como Recreation Area would correlate to a reduced impact compared to Alternative 2. However, Unit 47, and parts of Units 9 and 45 would not meet Forest Plan VQOs. Unit 43 is a commercial harvest in this alternative and this unit would have moderate impacts on the Lake Como viewshed, but would meet the VQO.

Cumulative Effects

For the project area, the long term effects of a healthier stand conditions have would have some beneficial impact to the collectively viewed landscape and the negative impacts associated with each alternative individually would not reach a threshold of lowering to overall landscape character (FEIS p3-263). There has never been a project specific plan amendment done to adjust the visual quality objectives for a vegetation management project, therefore there are no cumulative effects for this proposed amendment.

Application of FSM 1926.51 “Not Significant” Criteria

Our determination of whether this amendment is significant was done using the process in FSM 1926.51. The handbook states that changes to the land management plan that are not significant can result from four specific situations. This site-specific amendment is compared to those situations below:

Changes to the Land Management Plan That are Not Significant	Visual Quality Standard Amendment
1. Actions that do not significantly alter the multiple-use goals and objectives for long-term land and resource management.	The visual quality standard amendment does not alter the multiple-use goals and objectives for long-term land and resource management. The amendment affects a small area of the Bitterroot National Forest (less than 0.1 percent).
2. Adjustments of management area boundaries or management prescriptions resulting from further on-site analysis when the adjustments do not cause significant changes in the multiple-use goals and objectives for long-term land and resource management.	The visual quality objective amendment does not adjust management area boundaries. It provides for an adjustment to the VQO for a small portion of the entire Bitterroot National Forest.
3. Minor changes in standards and guidelines.	The visual quality objective amendment is a minor change to management area standards because the areas affected are a small portion of the Bitterroot National Forest.
4. Opportunities for additional projects or activities that will contribute to achievement of the management prescription.	There are no other opportunities for additional projects or activities that will contribute to achievement of the management prescription for the visual quality objectives.

Conclusion -- Significance/Non-Significance

Based on consideration of the four factors identified in FSM 1926.51, and considering the Forest Plan in its entirety, the adoption of the visual quality objective amendment to the Bitterroot National Forest Plan is not significant. This amendment is fully consistent with, but further refines and clarifies the means to achieve, current Forest Plan goals and objectives.